

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Atty Dkt. 124-838

SMITH et al.

C# M#

Serial No. 09/762,805

Group Art Unit: 2839

Filed: February 13, 2001

Examiner: M. Zarroli

Date: October 25, 2002

Title: FABRICATION OF OPTICAL WAVEGUIDES

Assistant Commissioner for Patents

Washington, DC 20231

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Technology Center 2600

Sir:

RESPONSE/AMENDMENT/LETTER

This is a response/amendment/letter in the above-identified application and includes an attachment which is hereby incorporated by reference and the signature below serves as the signature to the attachment in the absence of any other signature thereon.

Fees are attached as calculated below:

Total effective claims after amendment	11	minus highest number		
previously paid for	20	(at least 20) =	0	x \$ 18.00
				\$ 0.00

Independent claims after amendment	2	minus highest number		
previously paid for	3	(at least 3) =	0	x \$ 84.00
				\$ 0.00

If proper multiple dependent claims now added for first time, add \$280.00 (ignore improper)	\$ 0.00
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Petition is hereby made to extend the current due date so as to cover the filing date of this paper and attachment(s) (\$110.00/1 month; \$400.00/2 months; \$920.00/3 months)	\$ 0.00
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Terminal disclaimer enclosed, add \$ 110.00	\$ 0.00
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<input type="checkbox"/> First/second submission after Final Rejection pursuant to 37 CFR 1.129(a) (\$740.00)	\$ 0.00
<input type="checkbox"/> Please enter the previously unentered, filed	
<input type="checkbox"/> Submission attached	

Subtotal \$ 0.00

If "small entity," then enter half (1/2) of subtotal and subtract	-\$ 0.00
<input type="checkbox"/> Applicant claims "small entity" status. <input type="checkbox"/> Statement filed herewith	

Rule 56 Information Disclosure Statement Filing Fee (\$180.00)	\$ 180.00
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Assignment Recording Fee (\$40.00)	\$ 0.00
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Other:	0.00
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TOTAL FEE ENCLOSED \$ 180.00

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140. A duplicate copy of this sheet is attached.

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NIXON & VANDERHYE P.C.
By Atty: Stanley C. Spooner, Reg. No. 27,393

Signature: _____



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inter Patent Application of

SMITH et al.

Atty. Ref.: 124-838

Serial No. 09/762,805

Group: 2839

Filed: February 13, 2001

Examiner: M. Zarroli

For: FABRICATION OF OPTICAL WAVEGUIDES

* * * * *

October 25, 2002

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

REQUEST FOR RECONSIDERATION

This Request is responsive to the Official Action mailed July 25, 2002 (Paper No. 9), the date of response to which is October 25, 2002.

Claims 11 and 12 have been allowed, claims 2-5, 9 and 10 objected to and claims 1, 6 and 7 rejected in the outstanding Official Action. Claims 1-7 and 9-12 remain in the application.

The Examiner's confirmation that previous specification and claim objections have been overcome is very much appreciated.

Applicants also appreciate the Examiner's telephone interview on October 25, 2002, confirming that claims 2-5, 9 and 10 are objected to as depending from a rejected claim 1, but would otherwise be allowable if rewritten in independent form. At present,

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in view of the apparent allowability of even claim 1, applicants believe there is no need to rewrite these claims in independent form.

The Examiner's statement in paragraph 3 that applicants' previous arguments with respect to claims 1-7, 9 and 10 are moot is not understood, as the Examiner has indicated that claims 2-5, 9 and 10 clearly contain allowable subject matter. Clarification of the section 3 comments by the Examiner in the Official Action is respectfully requested.

I Claims 1, 6 and 7 stand rejected under 35 USC §103 as unpatentable over Booth in view of Hecht. The Examiner, in the second paragraph on page 3 of the Official Action, suggests that "the method forming the device is not germane to the issue of patentability of the device itself." The Examiner, in general,, is correct, although where interrelationships between claimed elements are recited, those interrelationships do have patentable significance. Applicants' claim recites structures and interrelationships between those structures, and it is incumbent upon the Examiner to demonstrate how and where those structures and structural interrelationships are shown in at least one of the cited prior art references.

II Additionally, in the last four lines of page 3 in the Official Action, the Examiner admits that the Booth reference "does not disclose that the light guiding path is the unmodified region and the modified region is the boundary of this path." This admission by the Examiner is very much appreciated. However, Booth clearly teaches the opposite of the claimed invention, i.e. that the light guiding path 7 is a region which has been modified, rather than unmodified as set out in applicants' claim 1. Thus, not only does

Booth fail to teach the elements and the interrelationships set out in applicants' claim 1, it specifically "teaches away" from applicants' claimed combination of elements.

It is noted that the Booth disclosure is a specific type of slab waveguide relying upon guiding lamina 1 and the fact that the refractive index of the material will increase when exposed to light. Reversing the parts of the guiding lamina that are exposed and unexposed would result in regions 11 having a higher refractive index than the region 7 (see Figure 2a). In such condition, the resulting structure would not then function as a waveguide (at least light would not be guided in the region 7). As a result, Booth clearly teaches away from applicants' claimed combination of elements and if the elements of Booth were reversed as suggested by the Examiner, Booth would not work.

The Examiner cites the Hecht reference as disclosing a light path that is unmodified and bounded by modified regions. Applicants have only been provided with pages 109, 210 and 219 which are taken out of context. The absence of copies of the other portions of the Hecht reference renders it impossible for applicants to properly respond. It is possible that the context of the disclosure in Hecht has been inadvertently misrepresented by the failure to include the remaining material contained in the individual chapters from which the above three pages have been selected. Copies of all pages in each of the chapters from which the above pages have been extracted is respectfully requested in order that applicants may understand the context of the Hecht disclosure and how the Patent Office is applying this disclosure.

However, even without the additional pages from the Hecht reference, it is clear that, contrary to suggesting applicants' structure, Hecht in Figure 6.1b discloses that silica

with fluorine will result in a reduction of refractive index. The Examiner suggests that this is a "tried and true way" of reducing refractive index of silica. However, there is nothing to suggest that this is a "tried and true" way of reducing refractive index of optical material or that this could be applied to somehow render it obvious to reverse the teachings of the Booth reference.

There is absolutely nothing in Hecht which suggests that one would ignore the teaching in the Booth reference which the Examiner admits and further that it would be obvious to combine the reverse teaching of the Booth reference with the Hecht reference in order to somehow arrive at applicants' independent claim 1. Therefore, in addition to providing with applicants with at least the related portions of the three cited pages in the Hecht reference so that proper analysis of these pages may be made, the Examiner is requested to point out how or why he believes there is any suggestion or reason for one of ordinary skill in the art to disregard the teaching in the Booth reference and instead combine it with the Hecht reference and thereby somehow render obvious applicants' independent claim 1.

Finally, with respect to dependent claim 6, the Examiner alleges that Hecht's Figure 11.3 relates to indiffusion of dopant materials. Applicants note that Figure 11.3 of Hecht has nothing to do with optical waveguides, guiding lamina, a light guiding path or boundaries of such path. In fact, Figure 11.3 has nothing at all to do with the present invention and clarification of any basis for this is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that pending claims 1-7 and 9-12 are in condition for

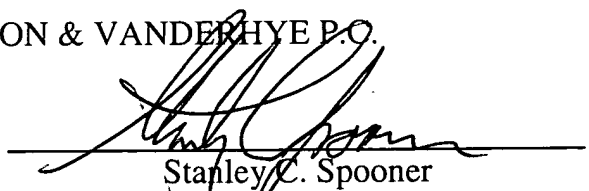
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allowance and notice to that effect is respectfully requested. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of these claims, he is respectfully requested to contact applicants' undersigned representative.

Respectfully submitted,

NIXON & VANDERHYTE P.C.

By: _____


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